AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

I claim:

1.-13. Canceled.

14. (Currently amended) The drilling fluid of claim ~~13~~ 37 wherein said polar base oil is a synthetic ester based oil.

15.-18. (Canceled)

19. (Currently amended) The drilling fluid of claim ~~13~~ 37 further comprising a fluid loss additive.

20. (Currently amended) The drilling fluid of claim 19 wherein said fluid loss additive is selected from the group ~~comprising~~ consisting of: oleic acid; quaternary ammonium compounds; calcium carbonates; styrene butadiene; and combinations thereof.

21.- 26.Canceled.

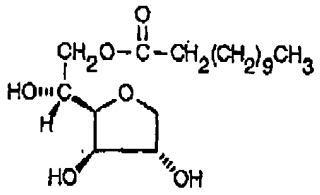
27. (Previously presented) The drilling fluid of claim 34 wherein said micelles in the palisade layer are packed sufficiently close to yield a rigid surfactant film.

28. (Previously presented) The drilling fluid of claim 34 wherein said fluid is prepared by formulating an invert emulsion comprising said base oil to which is added said ethoxylated sorbitan ester derivative followed by said sorbitan ester derivative.

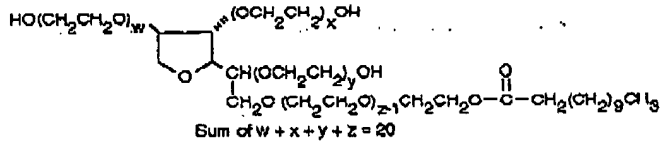
29. (Previously presented) The drilling fluid of claim 28 wherein said emulsion comprises about 85 to about 95 volume percent ester and about 5 to about 15 volume percent brine.

30. (Previously presented) The drilling fluid of claim 29 wherein said volume percent ester comprises said ester base oil, said sorbitan ester derivative, and said ethoxylated sorbitan ester derivative.

31. (Previously presented) The drilling fluid of claim 34 wherein said sorbitan ester has the formula:



32. (Previously presented) The drilling fluid of claim 34 wherein said ethoxylated sorbitan ester has a formula the same as or similar to:



33. (Previously presented) The drilling fluid of claim 34 wherein said sorbitan ester derivative and said ethoxylated sorbitan ester derivative are complimentary.

34. (Previously presented) An electrically conductive drilling fluid comprising a polar ester oil-base, a sorbitan ester derivative surfactant, and an ethoxylated sorbitan ester derivative surfactant, wherein said surfactants are in quantities sufficient to create micelles having enhanced concentration in the palisade layer, and wherein said polar ester oil-base comprises a monocarboxylic acid ester of a C_2 to C_{12} monofunctional alkanol.

35.-36. (Canceled)

37. (Currently amended) A drilling fluid comprising a polar base oil and complimentary fatty acid surfactants blended or combined such that the base oil and the surfactants comprise the oil based layer of an invert emulsion, wherein the base oil and the

surfactants comprise about 90 volume percent of the emulsion and calcium chloride brine comprises the water phase of the emulsion, ~~The drilling fluid of claim 36~~ wherein said complimentary fatty acid surfactants are selected from the group consisting of sorbitan esters, sorbitan ester derivatives, ethoxylated sorbitan esters, ethoxylated sorbitan ester derivatives, and combinations thereof, and wherein at least one of the complimentary fatty acid surfactants is more water soluble than another and at least one of the complimentary fatty acid surfactants is more oil soluble than another, such that the surfactants form micelles in quantities providing a staggered arrangement and denser concentration in the palisade layer of the drilling fluid than either surfactant would form alone, such that the drilling fluid has sufficient electrical conductivity to facilitate resistance-based wellbore logging while also having utility as an oil-based drilling fluid.

38.-39. (Canceled)

40. (Currently amended) The drilling fluid of claim ~~38~~ 37 wherein said fluid effects said electrical conductivity over a broad temperature range.

41. (Canceled)